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10/690,793	10/21/2003	David J. Monnie	8474.0004	5608

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EXAMINER	
KAWSAR, ABDULLAH AL	

ART UNIT	PAPER NUMBER
2195	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/690,793	MONNIE ET AL.	
	Examiner	Art Unit	
	ABDULLAH AL KAWSAR	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 December 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-45 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 31-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following claim language lack antecedent basis:

i. Claim 31, line 15 – said second application –

b. The following claims languages are not clearly understood:

i. Claim 31, line 15 recites “other than said second application" it is not clear which application is the second application and which one is the first application (i.e. system has more than two application? Notifying applications other than the two applications? Which application is the first application and which application is the second application?).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-5, 8-10, 12-13, 16-20, 23-25, 27-28, 31-35, 38-40, 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorrentino et al.(Sorrentino) US Patent No. 7080060, in view of Veselov(Veselov) US Patent No. 7131120.

6. Sorrentino and Veselov were cited in previous office action.

7. As per claim 1, Sorrentino teaches the invention substantially as claimed including a computer system for concurrent operation of plural applications, said computer system comprising:

(a) a memory, including a shared object space capable of storing at least one shared object and a listener (col 3, lines 1-4);

(b)a shared object stored in said shared object space and accessible to at least two applications so that at least a first application is capable of causing an event in said object, said first application running in a first machine (figure 2; abstract, lines 5-8); and

(c) a listener attached to said shared object and operably associated with a second application running in a second machine, said listener listening for said event (col 3, lines 41-58).

Sorrentino does not specifically disclose first application running in a first virtual machine; and shared object and operably associated with a second application running in a

second virtual machine and notifying said second application when said first application caused said event.

However Veselov teaches first application running in a first virtual machine (col 4, lines 39-43); and

shared object and operably associated with a second application running in a second virtual machine and notifying said second application when said first application caused said event (col 4, lines 44-48; col 5, lines 1-21).

8. It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Veselov into the method of Sorrentino to have application with shared object running in first and second virtual machine and notifying events to all the applications. The modification would have been obvious because one of the ordinary skills of the art would utilize virtual machine application to share resources to have a platform independent application execution with shared resources and notify all the applications about events messages received in the message queue to notify the current state of the system using the JMS messaging technology of publish and subscribe.

9. As per claim 2, Sorrentino teaches said listener is located in said shared object space (col 3, lines 1-4).

10. As per claim 3, Veselov teaches at least two applications are capable of causing said event (col 4, lines 33-41).

11. As per claim 4, Sorrentino teaches a second listener located in said shared object space and attached to said shared object (col 7, lines 46-51).

12. As per claim 5, Veselov teaches at least one of said virtual machines is a Java virtual machine (col 4, lines 39-41).

13. As per claim 8, Veselov teaches including a non-object oriented application (col 11, lines 3-5).

14. As per claim 9, Veselov teaches said non-object-oriented application is a C application (col 11, line 6).

15. As per claim 10, Veselov teaches access to said at least one object by said plural applications is synchronized (col 7, lines 53-58).

16. As per claim 12, Veselov teaches at least one object is copy shared among said plural applications (col 7, lines 53-58).

17. As per claim 13, Veselov teaches said at least one object is direct shared among said plural applications (col 6, lines 52-55).

18. As per claim 16, Sorrentino teaches the invention substantially as claimed including a computer system for concurrent operation of plural applications, said computer system comprising:

(a) a memory including a shared object space capable of storing at least one shared object and a listener (col 3, lines 1-4);

(b)a shared object stored in said shared object space and accessible to at least two applications so that at least a first application is capable of causing an event in said object, said first application running in a first machine (figure 2; abstract, lines 5-8); and

(c) a listener attached to said shared object and operably associated with a second application running in a second machine, said listener listening for said event (col 3, lines 41-58); and

Sorrentino does not specifically disclose first application running in a first virtual machine; shared object and operably associated with a second application running in a second virtual machine and notifying said second application when said first application has cased said event; and (d) said listener being able to identify which application caused said event.

However Veselov teaches first application running in a first virtual machine (col 4, lines 39-43);

shared object and operably associated with a second application running in a second virtual machine and notifying said second application when said first application has cased said event (col 4, lines 44-48; col 5, lines 1-21); and

(d) said listener being able to identify an application other than said second application as causing said event (col 5, lines 1-12; col 8, lines 6-17).

19. It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Veselov into the method of Sorrentino to have application with shared object running in first and second virtual machine with application identification. The modification would have been obvious because one of the ordinary skills of the art would utilize application running on virtual machine to have a platform independent application execution with shared resources and having application identification to be able to identify the requesting application. The identification of the application allows the listener in the JMS system to process the request to the specific object or resource request as requested and notify all the applications about events messages received in the message queue to notify the current state of the system using the JMS messaging technology of publish and subscribe.

20. As per claims 17-20, 23-25 and 27-28, they have similar limitations as of claims 2-5, 8-10 and 12-13 above. Therefore they are rejected under the same rational as of claims 2-5, 8-10 and 12-13 above.

21. As per claim 31, Sorrentino teaches the invention substantially as claimed including a computer system for concurrent operation of plural applications, said computer system comprising:

(a) a memory including a shared object space capable of storing at least one shared object and a listener (col 3, lines 1-4);

(b) a shared object stored in said shared object space and accessible to at least two applications so that at least a first application is capable of causing an event in said object, said first application running in a first machine(figure 2; abstract, lines 5-8);

(c) a listener attached to said shared object and operably associated with a second application running in a second machine, said listener listening for said event (col 3, lines 41-58); and

Sorrentino does not specifically disclose first application running in a first virtual machine containing a header capable of containing an identifier of the application that caused said event; shared object and operably associated with a second application running in a second virtual machine and notifying an associated application not causing said event of an occurrence of said event; and said listener being able to identify which application causes said event from said header.

However Veselov teaches first application running in a first virtual machine containing a header capable of containing an identifier of the application that caused said event (col 4, lines 39-43; col 8, lines 6-17; fig. 7, reference 704);

shared object and operably associated with a second application running in a second virtual machine and notifying an associated application not causing said event of an occurrence of said event (col 2, lines 24-38; col 4, lines 44-48; col 5, lines 1-21); and

(d) said listener being able to identify which an application other than said second application as causing said event from said header (col 2, lines 24-38; col 5, lines 1-21; col 7, lines 59-67 through col 8, lines 1-17; lines 46-65; fig. 7, reference 704;).

22. As per claims 32-35, 38-40, 42 and 43, they have similar limitations as of claims 2-5, 8-10 and 12-13 above. Therefore they are rejected under the same rational as of claims 2-5, 8-10 and 12-13 above.

23. Claims 6, 7, 21, 22, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorrentino et al.(Sorrentino) US Patent No. 7080060, in view of Veselov(Veselov) US Patent No. 7131120, and in view of DeMaster(DeMaster) US Patent No. 6066181.

24. DeMaster was cited in the previous office action.

25. As per claim 6, Sorrentino and Veselov do not specifically disclose said shared object space is linked to at least one application by a native method interface enabling said application to utilize a method of native to said application in interacting with said shared object.

However, DeMaster teaches shared object space is linked to at least one application by a native method interface enabling said application to utilize a method of native to said application in interacting with said shared object (fig, 1; col 4, lines 3-18).

26. It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of DeMaster into the combined method of Veselov and Sorrentino to link the shared space by native method interface. The modification would have been obvious because one of the ordinary skills of the art would have implemented the native method interface to be able to access the shared object from different application language.

27. As per claim 7, DeMaster teaches system includes a default directory with a native library (fig, 1; col 4, lines 3-18).

28. As per claims 21 and 22, they have similar limitations as of claims 6 and 7 above. Therefore they are rejected under the same rational as of claims 6 and 7 above.

29. As per claims 36 and 37, they have similar limitations as of claims 6 and 7 above. Therefore they are rejected under the same rational as of claims 6 and 7 above.

30. Claims 11, 14, 15, 26, 29, 30, 41, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sorrentino et al.(Sorrentino) US Patent No. 7080060, in view of Veselov(Veselov) US Patent No. 7131120, and in view of Barinov et al.(Barinov) US Patent Application Publication No. 2004/0025171.

31. Barinov was cited in previous office action.

32. As per claim 11, Sorrentino and Veselov do not specifically disclose plural applications implement a stock trading system.

33. However Barinov teaches plural applications implement a stock trading system (page 21, par. 0100).

34. It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Barinov into the combined method of Veselov and Sorrentino to use the application implementation in stock trading system. The modification would have been obvious because one of the ordinary skills of the art would have implemented the application in stock trading system for better utilization of shared objects.

35. As per claim 14, Barinov teaches a system manager that analyzes information pertaining to the operation of said shared object space (page 3, par. 0039).

36. As per claim 15, Barinov teaches a global name space in said shared object space (page 5, par. 0061).

37. As per claims 26, 29 and 30, they have similar limitations as of claims 11, 14 and 15 above. Therefore they are rejected under the same rational as of claims 11, 14 and 15 above.

38. As per claims 41, 44 and 45, they have similar limitations as of claims 11, 14 and 15 above. Therefore they are rejected under the same rational as of claims 11, 14 and 15 above.

Response to Arguments

39. Applicant's arguments filed 04/21/2008 have been fully considered but they are not persuasive.

40. In remarks applicant argues that:

(1) Veselov fails to teach "listener" in connection with JMS "publish and subscribe" communication.

(2) Veselov fails to disclose a listener that can identify the application causing an event in a shared object from the shared object's header.

41. Examiner respectfully disagree with the applicant:

i. As to point (1), applicant supports his argument mentioning that Veselov only teaches using listener with round-robin communication method and fails to disclose listener with publish/subscribe method. Examiner respectfully disagrees with the applicant. Veselov teaches listener with point to point, publish-subscribe and round robin communication mechanism where there are multiple entities listening to a message queue (col, 5, lines 11-17). In a JMS messaging system a listener is used with the message queue whenever there are multiple entities are communication between each other with a messaging queue which is shared within all the applications. To provide support to the

teaching of Veselov about JMS messaging queue and the technological details "Java™ Message Service API Tutorial" by Kim Haase from SUN Microsystems is being cited as a teaching reference. The tutorial shows the details of JMS messaging system with different types of communication method supported by JMS and the use of listener in messaging queue to service the messages and event notification between multiple applications including sample examples of implementations of Publish/subscribe communication mechanism with listener which is a part of the implementation of JMS communication mechanism (page 45, section 4.3).

ii. As to point (2), applicant supports his argument mentioning that the cited reference does not disclose having a listener that can identify the application causing an event in shared object. Examiner respectfully disagrees with the applicant. Veselov teaches using JMS as a messaging system to communicate between multiple applications and using a listener when there is more than one participant (col, 5, lines 11-17). Veselov also teaches using JMS queue and request having identification of the requestor in the request (message) to identify the request and other information related to the request and notify other application using publish-subscribe communication mechanism (col 2, lines 24-38; col 5, lines 1-21; col 7, lines 59-67 through col 8, lines 1-17; lines 46-65; fig. 7, reference 704;). A JMS message is serviced in a message queue which is shared by all the application and all the messages (request) in the message queue (library) includes header with information about the request. The claim language does not clarify how or which object header holds the information of the application that sends the request as there are

two different object wherein the object referring to a sub-object that holds the actual identification information in the specification. According to the specification page 18-19 paragraph 67, 68, 67 and figure 10B the object header holds the lock/unlock information only and refers to another object(lock node) in the shared location which holds the information of the application that request the object and other application's requests for objects. Accordingly the examiner interprets the JMS queue as the object that holds the request with the request identifying the application and also notifies other application about the request. To provide support to the teaching of Veselov about JMS messaging queue and the technological details "Java™ Message Service API Tutorial" by Kim Haase from SUN Microsystems is being cited as a teaching reference. The tutorial shows the details of JMS messaging system with different types of communication method supported by JMS and the use of listener in messaging queue to service the messages and event notification between multiple applications including sample examples of implementations of Publish/subscribe communication mechanism with listener which is a part of the implementation of JMS communication mechanism (page 45, section 4.3). The tutorial also discloses the details of message header and the information stored on a message header and the usage of message queue with listener with multiple participants (page 27-30, section 3.5-3.6).

Conclusion

42. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

43. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABDULLAH AL KAWSAR whose telephone number is (571)270-3169. The examiner can normally be reached on 7:30am to 5:00pm, EST.

45. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai T. An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

46. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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